

WHAT IS CLAIMED IS:

1. A removable pressure-sensitive adhesive sheet which comprises a pressure-sensitive adhesive layer constituted of a pressure-sensitive adhesive comprising a polymer in which the content of low-molecular components having a molecular weight of 10^5 or lower is 10% by weight or lower.

2. The removable pressure-sensitive adhesive sheet of claim 1, wherein the polymer constituting the pressure-sensitive adhesive is an acrylic polymer obtained by polymerizing one or more monomers in liquid or supercritical carbon dioxide.

3. The removable pressure-sensitive adhesive sheet of claim 1, which is for use in semiconductor wafer processing.

4. The removable pressure-sensitive adhesive sheet of claim 2, which is for use in semiconductor wafer processing.